Humanitarian Nursing Challenges: A Grounded Theory Study

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ABSTRACT In response to the 2004 tsunami disaster in the Indian Ocean, the U.S. Navy deployed teams aboard the USNS Mercy to provide aid during Operation Unified Assistance (OUA). To date, few research studies have examined how Navy nurses prepared for and clinically performed during this relief operation. The current article describes the challenges faced by Navy nurses throughout OUA. A purposive convenience sample was recruited; 11 participated. Data were collected from interviews, observations, field notes, memos, and a demographic tool. Information was categorized, coded, compared to incoming data, then analyzed using Strauss and Corbin's open coding, axial coding, and selective coding methods. A theoretical model was developed to illustrate how participants experienced the mission. Key lessons learned were that most were unprepared for providing pediatric care, and saying "No" in delivering care. Recommendations include: deployment of advanced-practice nurses (specialists in pediatrics and well-mental health) and predeployment training on moral distress.

INTRODUCTION

More than ever before, a "marked increase in the number of natural disasters (floods, droughts, earthquakes, hurricanes), along with greater levels of loss of life, property, and material damage" is apparent.[1] Damages associated with these types of catastrophes are worsened when tragedy hits underdeveloped countries with dense populations that are already precariously vulnerable and burdened with extreme poverty, environmental degradation, less developed infrastructure, and inadequate emergency preparedness.[1]

The U.S. military has routinely played a major role in humanitarian assistance efforts throughout the world. According to the 2001 Joint Chiefs of Staff publication, "Joint Tactics, Techniques and Procedures for Foreign Humanitarian Assistance," the purpose of our foreign humanitarian assistance is to "relieve or reduce the results of natural or man-made disasters or other endemic conditions, such as human suffering, disease, or privation that might present a serious threat to life or that can result in great damage to or loss of property."[2] Because our military is uniquely equipped and structured and is trained to rapidly respond, it has a long, proud tradition of providing disaster relief assistance overseas. With an eye on the future, the Chairman of the Joint Chiefs of Staff (CJCS), in his guidance for 2007–2008, articulated his priorities and strategic objectives. To meet the precedence of properly balancing global strategic risk, he directed that we build relationships through Theater Security Cooperation and focus on capacity building, humanitarian assistance, frameworks for improving governance, and cooperation in enforcing the rule of law.[3] Aligned with the CJCS' guidance, the Chief of Naval Operations' plan for the upcoming year recognizes that to be the global preeminent maritime force, the Navy will conduct a spectrum of operations ranging from combat to humanitarian assistance.[4] The U.S. Navy Medicine team has a distinguished history and promising future of supporting this range of operations, and as part of this team, Navy Nurse Corps officers are deployed to serve in various operational and humanitarian theaters.[5] In her address to the Senate Appropriations Committee in March 2007, the Director of the Navy Nurse Corps, Admiral Bruzek-Kohler, discussed the military relevance of Navy nurses in caring for the citizens of the world through humanitarian missions. She proudly highlighted that when Navy nurses engage in humanitarian missions, they reflect America's generosity, compassion, and goodwill.[5]

To prepare for future military humanitarian missions, Navy nurses and other authorized personnel will likely turn to resources and lessons learned from past humanitarian assistance and disaster relief missions. Although it is clear that military

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nurses will be among the first responders in prospective disasters, recent research shows that military nurses are not always certain of "how to access previous after-action reports for review and use in improving training."[6] Accounts by military nurses show that the content of such after-action reports are believed to be positively skewed and rarely contain items related to nursing practice and that they specifically lack "detailed information on nursing practice, training, leadership, logistics, communication, supply systems, and psychological issues [that] would be helpful for nurses to improve performance."[6]

Today, when preparing for humanitarian deployments, military nurses are able to turn to readily available information in such peer-reviewed journals as *Military Medicine* and the *Joint Center for Operational Analysis Journal*, both of which dedicated entire issues in the past year to medical lessons learned during natural disaster relief operations. *Military Medicine's* 2006 October supplement focuses on anecdotal lessons learned from the 2004 tsunami, mostly by exploring relief efforts aboard the hospital ship USNS Mercy during Operation Unified Assistance (OUA); a narrative is provided by LCDR Pryor, a U.S. Public Health Service nurse.[7] RN Yates, a Project Hope volunteer, describes humanitarian nursing efforts aboard the USNS Mercy during OUA in the 2005 issue of Medsurg Nursing: official journal of the American Academy of Medical-Surgical Nurses.[8] An extensive review of the literature reveals that scholarly research on military nurses' experiences in humanitarian assistance and disaster relief is relatively scarce when compared to the wide variety of reports found on the role of the military nurse in combat situations. Moreover, experiences of Navy nurses during OUA aboard the USNS Mercy have not been explored, analyzed, or described from a research perspective. Few studies have examined natural disaster relief efforts and humanitarian assistance efforts from a nursing perspective, and even fewer have examined nurses' experiences, preparation, practice, and collaboration required to provide competent care to the disaster stricken. Although U.S. military nurses have long participated in humanitarian missions, the paucity in the availability of publicly accessible research in this area supports the need for such a study.

As a positive step toward filling a knowledge gap, the author adds to the literature by examining how Navy nurses prepared, trained, performed, and worked with nurses from a nongovernmental organization (NGO) aboard the USNS Mercy during OUA. This article provides a description of the humanitarian nursing challenges faced by the study's participants.

Significance and Aims

The impact of the most powerful earthquake that erupted beneath the Indian Ocean on December 26, 2004 cannot be understated; the event triggered a deadly tsunami that devastated 11 Asian and African countries and killed more than 280,000 people, displaced over 1 million, and affected the lives of nearly 5 million more.[9] Unprecedented media coverage prompted what many consider the largest global humanitarian effort of our generation.[10] The U.S. Navy responded by providing humanitarian aid through Operation United Assistance. In a historic "first" on the hospital ship USNS Mercy, the U.S. Navy deployed a team consisting of members from the Navy, the U.S Public Health Service, the Project Hope (a nongovernmental organization), and a civilian mariner crew to provide aid.[11]

OUA aboard the USNS Mercy included four missions within a 5-month deployment: tsunami disaster relief in Banda Ache; humanitarian assistance in Alor Indonesia and Dili, East Timor; earthquake disaster relief on Nias Island; and humanitarian assistance in Papau New Guinea. The objectives of this research study were: (1) to explain U.S. Navy nurses' experiences during OUA—how they prepared, clinically performed, and worked with nongovernmental organization nurses and (2) to construct a grounded theory.

Navy nurses' experiences in OUA aboard the USNS Mercy is significant because the scope of the deployment was unprecedented, and the historic joint mission was not the last of its kind. Since 2005, subsequent collaborative efforts were made among Navy, NGOs, and federal services nurses aboard the USNS Mercy, USNS Comfort, USS Pellilieu, USS Boxer, and USS Kearsarge during 2006, 2007, and 2008 humanitarian aid voyages. This research study's added knowledge base will be of benefit to the global community of nurses because it has potential to inform and improve future worldwide relief efforts aboard U.S. Navy hospital ships and other platforms across many disciplines.

METHODS

Design

A descriptive qualitative design using a grounded theory approach was used to study the experiences of Navy nurses during disaster relief and humanitarian missions aboard a hospital ship. Because the OUA nursing phenomenon was relatively unknown at the time, grounded theory methodology presented as an ideal model, as it makes great contributions to knowledge in an area where little research has been done.[12] Institutional Review Board approval was received before study commencement. All participants gave informed consent and were requested not to share identifying information during the interviews.

Sample and Participants

Twenty-five to 30 U.S. Navy nurses were on board the hospital ship at any given time, participating in various phases of the mission. Eligibility criteria for inclusion in this study were active duty Navy nurses who had deployed aboard the USNS Mercy during any part of the OUA mission, who were willing to participate in the study, and who were able to recall and talk about experiences aboard the USNS Mercy for any portion of the OUA deployment.

Purposeful strategies for the selection of participants were employed. A convenience sample of Navy nurses was

TABLE I. Patient Demographics

	Number of Nurses	Range	Mean
Gender			
Female	6		
Male	5		
Age (during OUA)	11	23–51	38.1
Rank (during OUA)	11	01–05	03
Deployment Days	11	34–155	129

recruited through posted and emailed advertisements, as well as by word of mouth referrals.

Eleven Navy nurses consented to participate in the research study. Participants spent an average of 122 days deployed aboard the USNS Mercy, with a range of 34 to 155 days. Table I shows participant demographics. Details of the primary clinical roles during the deployment are shown in Figure 1.

Data Collection

The research study's plan entailed the simultaneous collection, organization, and analysis of data and results in a theoretical formulation of the experiences being explored per grounded theory methodology.[12,13] A premise of nursing experiences, clinical practices, clinical preparation, and interagency collaboration involved in a humanitarian assistance and disaster relief mission aboard a hospital ship was developed through analysis of transcripts of tape-recorded interviews (face-to-face and telephone conversations) and other contributing data (observations, field notes, and memos). Table II lists interview questions and response prompts used by the principle investigator. Interviews took place more than a year after the deployment's end.

Data were collected, coded, categorized, and compared to incoming data, as is fundamental to grounded theory's constant comparative method.[12,13] The study resulted in a theoretical formulation of the experiences being explored. Data collection continued until the theoretical ideas that had emerged from continuous analysis and theoretical sampling evolved into grounded theory.[12,13]

Data Analysis

Strauss and Corbin's methodology of open coding, axial coding, and selective coding as conducted by the principle investigator and verified by a research team of consultants was used to analyze data. The principle investigator examined each line of data to define and categorize information through open coding, then focused on the participants' view of reality through line-by-line coding.[13] Resulting data were divided into segments and re-examined for commonalities that reflected like categories or themes. Once categorized, data were examined for properties such as specific attributes or subcategories. Throughout this process the constant comparative method, where current data are compared to incoming data, was utilized.[13] Techniques included: analysis of words, phrases, or sentences; analysis through making comparisons; and the use of questions. In axial coding, the research team progressed

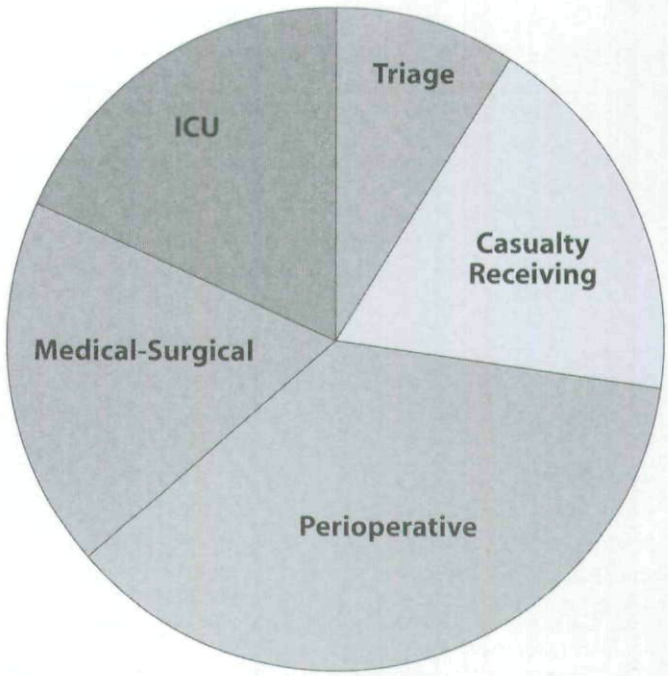

FIGURE 1. Primary clinical roles during the deployment.

to discussion of the interconnections between categories and subcategories. The team collaborated in selective coding, focusing coding efforts, and discussing "conditional matrix as an analytic diagram that maps the range of conditions and consequences related to the phenomenon or category."[14] Subsequently, a theory grounded in the participants' data, which explained the phenomenon studied through a visual model, was formed. Several research team meetings were held to review and verify the coded data, concepts and categories, and levels of abstraction of the developing theory. The theory that emerged actually came from the prescribed analysis of the data itself, "grounded" in the data collected and not taken from a priori research.

Three criteria were used to ensure the quality of the proposed inquiry: rigor, dependability, and credibility. Rigor was addressed by the principle investigator who meticulously recorded every step of the research process. Conscientious efforts were made to keep a comprehensive audit trail. Memos kept during data collection and data analysis were used during audit checks. A grounded theory mentor was consulted to perform and review the research process as it unfolded and to ensure dependability of the findings. To ensure the resulting theory was empirically grounded in the data, credibility of the findings was achieved through "member checking," wherein participants were given opportunities to review transcripts and validate that information accurately reflected their OUA experiences.

RESULTS

Grounded Theory

Beginning with the packing of seabags, readiness (defined through action and performance) emerged as the most

TABLE II. List of Interview Questions and Prompts[a]

Question	Probes
A. Tell me how you found out you had to deploy aboard the USNS Mercy.	—Tell about the process by which you prepared for Operation Unified Assistance aboard the USNS Mercy.
B. Tell me about your experience during Operation Unified Assistance aboard the USNS Mercy.	—Tell me about the nature of your work role during Operation Unified Assistance aboard the USNS Mercy. —Tell me what it was like for you to be a military nurse during Operation Unified Assistance aboard the USNS Mercy.
C. Tell me about the process by which you provided clinical nursing care.	(Training and Evidence-Based Practice) —Tell me how you provided nursing care on a daily basis. —Tell me about the process by which you prepared to provide clinical care during Operation Unified Assistance aboard the USNS Mercy. —Tell me what it was like to provide nursing care. —Tell me what knowledge and skills were most helpful in providing nursing care. —Tell me about experiences you were not prepared for. —Tell me what particular resources you wish you had. —Tell me about a difficult decision you had to make. —Tell me about a particularly meaningful experience you had. —How did you measure success in providing clinical care? —How was it working with hospital corpsmen and MDs?
D. Tell me about the process by which you worked with nurses from Project Hope.	— Tell me about what it was like working with the nurses from an NGO.
E. Tell me how OUA compared to other deployments you have experienced.	
F. Tell me how your OUA experiences have influenced your decision about a career in the Navy.	
G. Looking back, if you could change one thing about your experience during Operation Unified assistance, what would you change?	
H. Tell me about any issues encountered since your return from deployment.	
I. Is there anything else you would like to add about your experiences that you have not already included?	
J. What recommendations do you make for future disaster relief/humanitarian deployments?	
K. What research studies do you recommend (clinical, policy, admin., training)?	

[a]Interview questions changed as data were collected, focusing on emerging processes central to the phenomenon.

salient dimension and core category of this study. The grounded theory model illustrated how Navy nurses experienced this attribute during Operation Unified Assistance through the roles they played and the relationships they encountered (Fig. 2). Adaptive mindsets, knowledge, skill sets, and coping mechanisms contributed to mission readiness and proved significant in helping participants overcome challenges faced during different phases of the operation. Readiness was influenced by each individual's ability to be prepared for each mission at hand. When prepared, participants responded by navigating and negotiating their various roles and relationships; this action led to optimized readiness, accomplishment, and contentment. When unprepared, participants found that unresolved reactions to circumstances occurred, and that this led to distress, conflict, and disconnectedness. As much as the participants attempted to do their jobs well, some situations were too difficult to process with their current skills and expertise. Although a small number of participants reported helplessness in dealing with certain circumstances, some found situations for which they were simply unprepared and were consequently unable to adjust, a cause for concern at more than 1 year after the deployment. Throughout OUA deployment, nurses engaged in different jobs and relationships and continued to encounter difficulties. Although the overall vision for the mission was one of ambassadorship to "do good things" and "teach others how to fish," several overriding challenges

FIGURE 2. Grounded theory of Navy nurses during OUA on the USNS Mercy.

were recognized by the participants while they were engaging in humanitarian nursing.

Experiences aboard the USNS Mercy during Operation Unified Assistance were repeatedly described by participants as "rewarding" and being a "highlight" of their Navy careers. Positive superlatives were consistently used. The mission was an opportunity they would never be able to repeat, either in America or in a lifetime. The deployment was praised as "one of a kind" and "like no other experience."

Humanitarian Nursing

Although not all participants were originally assigned to the hospital ship as an operational platform, they nevertheless acclimated to the hospital ship and its functions through shipboard orientation and unit-specific training, which included training on biomedical equipment and paper charting. Proficiencies identified as most helpful in providing quality patient care were: ability to remain calm, flexible, culturally sensitive, and diplomatic; skill in mediating and resolving conflict; ability to stay physically fit; capability of caring for patients of all ages; competency in staying well-rounded with current clinical experience; skill in appropriately placing nurses in workspaces that matched their clinical strengths; and aptitude in retaining basic psychosocial assessment and medical-surgical nursing skills.

Pediatric Nursing Challenges

The domain in which study participants unanimously found they were least prepared was that of pediatric nursing, and in particular, pediatric deaths. Participants identified facing such challenges by scheduling and spreading pediatric nursing experts across work shifts, conferring with specialty pediatricians deployed aboard the USNS Mercy who would spend the night in the intensive care unit (ICU) when there were critically ill children in the ICU, and relying on Navy nurses' past pediatric nursing experience and relocating these specialists from previous primary workspaces to the ICU when needed.

A number of study participants verbalized the circumstances they faced after learning children they had treated had expired. One recounted a painful experience with an infant's death while ashore in Banda Aceh, Indonesia: "Having babies die is very painful for me. And one of the hardest ones was when we walked in and there was this infant in an isolette struggling for life ... I just stood there in just utter disbelief that this was happening right in front of me and I could not do any thing ..." Another nurse stated: "[The death of an infant] was hard—and knowing in the United States, some of these babies would've lived. Its something I still wrestle with." One nurse summed up how most of the participants dealt with such deaths: "I think for a while you suffer when you come back. A little bit of what they call 'care giver exhaustion' ... 'compassion fatigue' ... I still think I have some of that ... I scheduled critical incident debriefs and just talked it out with myself and got counseling. I didn't think I needed it ... because I'm a nurse, and I can handle anything." Participants identified that they dealt with pediatric deaths by using critical incident debriefs and the services of psychiatrists, social workers, chaplains, and mostly, nurse colleagues.

Saying "No"

A notable lack of preparedness for ethical conflicts was also identified. Participants experienced anguish and often verbalized their reactions when they were not able to stay long enough to provide certain humanitarian nursing procedures. They sometimes had to say "No" to delivering healthcare services because of time constraints, a limited continuum of care in the host nation's infrastructure, mere volume, or getting called away to respond to other emergencies. They told of the seemingly inadequate treatment they provided by using metaphors such as "drop in the bucket" and "mere bandaid." They described being overwhelmed as akin to "walking into a stadium of 10,000—how can you touch all?" The experiences for those who went ashore were particularly difficult and described as "heart breaking" or "like playing God."

One commented: "I don't think anybody deals with it. You still close your eyes, and you see the faces of those people you couldn't help ... all you could say is, 'I'm sorry ... we would like to help ... but we don't have the services to help you.' We tried to help the kids ... it was very hard ... felt like you were God—picking the ones you were going to save and the ones who were going to die." Most participants conveyed that they had to consciously think about the good they did; they told staff to think about the positives of the nursing care they gave. "I try to remember, 'Well, at least I did some good for some of them.'"

DISCUSSION

The current study supports findings in the literature that both negative and positive aspects of humanitarian assistance and disaster relief coexist. As with other relief workers in other situations, Navy nurses experienced cultural, environmental, and organizational negative stressors during OUA; positive aspects of both included such rewarding occasions as that of providing good care for distressed patients and developing strong relationships with patients and other workers.[15–18] Another commonality among relief workers in other circumstances and nurses in this study was in identifying constructive coping mechanisms, including humor, social support, counseling, and debriefing.[15–18] Sentiments from the literature regarding anecdotal reports from disaster relief and humanitarian assistance missions, notably, the importance of clinical competence, collaboration, communication, compassion, innovation, flexibility, cultural awareness and respect, and preparatory and ongoing training, were echoed.[15–18]

This study keenly adds to the literature on humanitarian work from a nursing perspective. It gives voice to voices

that have not been heard—highlighting the challenges of this rewarding work. Participants were most unprepared for providing pediatric care and most uncomfortable in saying "No" to care delivery. This study augments the literature in the presentation of the details of challenges faced by its participants. The study participants identified lessons learned and made recommendations to include advanced practice nurses, specifically specialists in pediatrics and well-mental health, in humanitarian missions for staff support and reinforcement. In addition, the participants recommended that education on moral distress and coping mechanisms be taught before humanitarian work.

The study's Navy nurses' accounts begin with the process of packing seabags, progress to reports of steaming west, and conclude with their engagement in humanitarian nursing. The manner in which Navy nurses prevailed in getting the job done (the mission: readiness) is a testament to their skills, knowledge, mindset, and coping abilities. Results from this study suggest that benefit would be derived from the institution of an entire program of research regarding training for nurses who will deploy in future humanitarian assistance and disaster relief tours. An integrated approach in which both qualitative and quantitative methods are utilized could result in a fuller understanding and conceptual model development in this study area. Initially, an additional qualitative research study examining the experiences of the NGO nurses deployed during OUA and subsequent humanitarian missions aboard the USNS Mercy, USNS Comfort, and other platforms could be undertaken. Given the increasing use of NGO personnel within the uniformed services, knowledge of how the NGO nurses experience the humanitarian deployments aboard the hospital ships could well contribute to planning strategies for team building and skill mix in future missions.

Moral distress, defined as "a feeling state experienced when a person makes moral judgments about a situation in which he or she is involved, but does not act on those judgments," is experienced by nurses who have been deployed during disaster relief and humanitarian assistance missions phases of a deployment.[19] Examination of the concept of moral distress and its significance to this study area could provide another valuable basis for future research studies, and the need for further examination is suggested by this study. Specific comments on the salience of moral distress when confronting situations in which little could be done to assist indigenous people lacking permanent health care resources were made by participants in the current study. Future research could be informed by the model of moral distress in military nursing developed by Fry, Harvey, Hurley, and Foley from interviews with 13 Army Nurse Corps officers who had deployed to military crises, such as in war and humanitarian missions.[19] Qualitative studies describing the moral distress phenomenon in Navy nurses could be performed. Subsequent development of a reliable and valid measure of moral distress in military nurses would provide the basis for future model testing. Relationships between moral distress and such related concepts as resilience and suffering in providing disaster relief and humanitarian care aboard a hospital ship platform could provide a valuable basis for planning intervention studies.

Research to identify and compare stressors experienced by Navy nurses deployed to humanitarian missions with those experienced by Navy nurses deployed in support of Operation Iraqi Freedom is also recommended. Recognition of stressors and coping mechanisms will assist in efforts to prepare, support, and facilitate optimal readiness and performance in humanitarian missions. This research study gave voice to the challenges Navy nurses faced during such a mission. Participants touted the deployment as "rewarding," and one individual poignantly shared the following: "I try to remember that an ounce of humanitarianism is worth a pound of war ... that's what we did."

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REFERENCES

1. United Nations' Office for the Coordination of Humanitarian Affairs: Humanitarian Issues, no date. Available at http://www.ochaonline2.un.org; accessed January 18, 2006.
2. Joint Chiefs of Staff: Joint tactics, techniques, and procedures for foreign humanitarian assistance. Washington, D.C. Joint Publication 3-07.6, 2001, p.I–1.
3. Mullen MG: CJCS guidance for 2007–2008, October 1, 2007. Available at http://www.jcs.mil/CJCS_GUIDANCE.pdf; accessed December 7, 2007.
4. Roughead G: CNO guidance for 2007–2008, October 25, 2007. Available at http://www.navy.mil/docs/CNO_Guidance.pdf; accessed December 3, 2007.
5. Bruzek-Kohler CM: Statement of Rear Admiral Christine Bruzek-Kohler to the Senate Appropriations Committee, March 7, 2007. Available at https://wwwa.nko.navy.mil/portal/page?paf_pageId=page11924; accessed December 13, 2007.
6. Ross MC, Smith KS, Smith A, Ryan R, Webb L, Humphreys S: Analysis of after-action reporting by deployed nurses. Milit Med 2008; 173: 210–6.
7. Pryor T: Health diplomacy through collaboration and a story of hope in tsunami-ravaged Banda Aceh, Indonesia: A U.S. Public Health Service Nurse Corps Officer perspective. Milit Med 2006; 171: 44–7.
8. Yates M: Medical-surgical nurses volunteer to aid tsunami victims. Medsurg Nurs 2005; 14: 331–4.
9. United Nations' Office for the Coordination of Humanitarian Affairs: Impact of emergencies, no date. Available at http://ochaonline2.un.org accessed July 18, 2005.
10. Mills EJ: Sharing evidence on humanitarian relief. BMJ 2005; 331: 1485–6.
11. Navy Newstand: USNS MERCY arrives in 7th fleet AOR to aid tsunami relief efforts, no date. Available at http://www.navy.mil; accessed July 18, 2005.

12. Strauss A, Corbin J: Basics of qualitative research: Techniques and procedures for developing grounded theory. Thousand Oaks, CA, Sage, 1998.
13. Strauss A, Corbin J: Basics of qualitative research: Grounded theory procedures and techniques. Newbury Park, CA, Sage, 1990.
14. Charmaz K: Grounded theory: Objectivist and constructivist methods in Handbook of Qualitative Research, pp 509–535. Thousand Oaks, CA, Sage, 2000.
15. Cox CW: Shipboard nursing on aircraft carriers: the perceptions of twelve navy Nurses. Nurs Outlook 1997; 3: 247–52.
16. Soliman HH, Lingle SE, Raymond A: Perceptions of indigenous workers following participation in a disaster relief project. Community Ment Health J 1998; 34: 557–67.
17. Griffiths R, Emrys E, Lamb CF, Eagar S, Smith M: Operation Safe Haven: the needs of nurses caring for refugees. Int J Nurs Pract 2003; 9: 183–90.
18. Bjerneld M, Lindmark G, Diskett P, Garrett MJ: Perceptions of work in humanitarian assistance: interviews with returning Swedish health professionals. Disaster Manag Response 2004; 2: 101–8.
19. Fry ST, Harvey RM, Hurley AC, Foley BJ: Development of a model of moral distress in military nursing. Nurs Ethics 2002;9: 373–87.